

TEMPLATE
Standard Operational Guideline
Scott Proflow 3 Powered Air Purifying Respirator (PAPR)

PURPOSE:

To provide guideline instructions for usage of the Scott Proflow 3 PAPR

This PAPR system is used to provide respiratory protection for staff during various tasks such as the gross decontamination of chemically contaminated patients.

EQUIPMENT LOCATION: (REMAIN BLANK FOR EACH HOSPITAL TO FILL IN)

OPERATIONAL INSTRUCTION GUIDELINES:

The Proflow 3 PAPR is equipped with a digital display to provide status information about the performance of the blower. The display shows the BATTERY CHARGE STATUS designated by a "C" with a number as well as an AIR FLOW STATUS designated by an "F" with a number. Upon power up, the PROFLOW 3 respirator will sound an ALARM tone as a functional test. *NOTE: If the ALARM tone does not function after power up, do not use the respirator. Remove from service and tag it for repair by authorized personnel.*

Battery Charge Status Display Readings:

1. C9 to C7 indicates the battery charge is sufficient to provide full duration of the respirator with fresh air filtration elements.
2. C6 to C1 indicates the battery charge will provide less than full duration of the respirator. The respirator user must monitor the battery charge status closely;
3. C0 indicates the battery charge is nearly exhausted and that you should immediately leave the contaminated area and recharge the battery;
4. When there are five to ten minutes of blower shut down, the display will start blinking C0 and the ALARM tone will sound twice approximately every thirty (30) seconds. The respirator user must exit the hazardous atmosphere and terminate use of the respirator until the battery is recharged.

Airflow Status Display Readings

1. F9 to F3 indicates the standard range of blower efficiency to provide full duration from the charged battery;
2. F2 to F1 indicates the blower efficiency is still acceptable, but blower resistance has increased to the point where it will shorten the expected battery duration;
3. F0 indicates the blower efficiency has decreased below acceptable levels due to increased resistance either from filter blockage or some other cause and that the blower may not be able to maintain the required flow. The display will begin

blinking F0 and the ALARM tone will sound once approximately every two (2) seconds. The respirator user must exit the hazardous atmosphere and terminate use of the respirator until filters are replaced or other cause of flow restriction is identified and corrected.

NOTE: When any ALARM sounds, the user must immediately leave the contaminated atmosphere, terminate use of the respirator, determine the cause of the ALARM, and take the appropriate corrective action.

If the breathing tube is not already attached to the butyl hood attach the tube as follows:

1. If the breathing tube is attached to the Proflow 3 blower unit remove the tube by unscrewing the female threaded collar from the blower unit.
2. Turn the butyl hood inside out and locate the cloth ribbons behind the head band.
3. Secure the straight flange end of the breathing tube behind the head band using the cloth ribbons as follows. Position the straight flange end of the breathing tube between the two lengths of cloth ribbon. Tie the ribbons around the third ridge with a simple overhand knot, wrap the two ends of the ribbon under the tube and tie another simple overhand knot opposite the first knot, and finally tie a snug shoelace style bow or a square knot.
4. Tuck the straight flange end of the breathing tube behind the head band. Locate the breathing tube sleeve in the middle of the back between the inner apron and the outer apron. Feed the breathing tube with the female threaded collar (blower unit end) first through the hood.
5. To position the breathing tube properly within the sleeve hold the straight flange end of the hose and lift the hood turning the hood right side out. Pull on the blower end of the tube to draw any excess slack down through the breathing tube sleeve. Smooth the inner and outer aprons and the breathing tube sleeve until the breathing tube extends straight down from the head band area.
6. Turn the Proflow 3 inside out and locate the cloth ribbons on the breathing tube sleeve. Secure the breathing tube with the tube sleeve using the cloth ribbons on the outside of the breathing tube sleeve as follows. Wrap the two ends of the ribbon under the sleeve and tie a simple overhand knot. Then wrap the two ends of the ribbon under the tube/sleeve and tie a simple overhand knot opposite the first knot. Finally, tie a shoelace style bow or square knot to secure.

DONNING RESPIRATOR

1. Attach the breathing tube to the blower assembly by removing the Retaining Ring from the blower assembly (be sure to save the ring) and attach the female end of

- the breathing tube onto the blower assembly by threading the collar onto the air outlet clockwise until hand tight.
2. To install the air filtration cartridges remove the three red caps (be sure to save for storing the unit) and inspect the gaskets in each of the air filtration element ports (replace if damaged or missing). Open sealed packages containing the cartridges and attach the cartridges to the blower assembly by threading into the air filtration element ports until hand tight. *Tighten firmly but do not over tighten.*
 3. To turn on the Proflow 3 blower unit, push the push-button switch to the ON position to confirm that the blower is working and the battery is fully charged. Leave the blower ON while donning the butyl hood.
 4. Don the waist belt with the blower assembly so that the breathing tube outlet is located at the top of the unit. Fasten the buckle and adjust the waist belt. Position blower assembly on back of the hip on left side of body. When properly donned, the ON/OFF switch shall be visible to the user.

Respirator Butyl Hood Donning:

1. Turn the inner and outer aprons of the butyl hood inside-out to provide access to the head band area. Locate the breathing tube over the left shoulder while placing the head into the head band of the butyl hood. Fit the padded portion of the head band around the forehead with the visor window centered in front of the face.
2. Smooth the inner apron against the upper body. Draw the neck cord snug around the neck by holding the ends of the cord, pressing the black button inward as you slide the cord lock toward your chin. Do not over tighten the neck cord.
3. Any additional protective clothing must be donned so that the inner apron is inside the protective clothing and the outer apron drapes over the outside of the protective clothing. The additional protective clothing must not restrict the airflow to the air filtration cartridges on the PROFLOW 3. Verify that the outer apron is laying flat with no folds or wrinkles that would reduce protection.
4. Blower assembly and breathing tube must be arranged so there is enough slack in the breathing tube so the respirator user can turn his/her head through a full range of motion without the breathing tube pulling on the butyl hood, the breathing tube is not pinched closed, or the breathing tube does not interfere with other protective clothing or equipment. Make sure there is not so much slack that the tube will snag on anything.

Removing the PAPR:

Remove the PAPR only in accordance with the Respiratory Protection Program.

1. Return to an area of clean air and proceed to decontamination if necessary.
2. When decontamination is complete and it is safe to remove the butyl hood and PAPR roll up the butyl hood starting at the bottom rear and proceeding up the back of the neck.
3. Remove the head from the head band.
4. Lift the butyl hood away from the body keeping it rolled to contain any residual contamination that might be present.
5. Turn the power switch to the OFF position.
6. Disengage the belt buckle and remove the belt and blower assembly.

7. After decontamination and termination of use, handle the butyl hood with care as residual contamination may be present. Treat the hood as a contaminated or potentially contaminated object.

Cleaning & Storage of equipment:

1. Thorough decontamination must be performed in accordance with established procedures. Water and standard nonabrasive decontamination cleaners will clean the material of the butyl hood. Allow the hood including the neck cord to dry completely before storage. Do not store butyl hood wet or damp. Note: Due to the nature of some contamination, certain used hoods may be declared unsuitable for cleaning and reuse. Remove unusable butyl hood and dispose of properly.
2. The head band may be removed and cleaned by turning the hood inside out to access the hood. Unsnap the four snaps holding the head band in the hood. Wash the head band using water with mild soap or detergent. Rinse thoroughly in plain water. Allow the head band to dry completely. When the head band is completely dry, position the head band with the plastic forehead guard toward the face shield and the top head strap against the inside of the hood. Be sure there are no twists in the head band.
3. Inspect the butyl hood for damage such as holes, tears, or broken seams. If the hood is damaged in any way, dispose of the hood.
4. Clean, disinfect and inspect the PAPR blower unit after each use. Surface clean the blower unit by using a damp sponge soaked in an approved cleaning solution to wipe the exterior surfaces of the filter/motor-blower assembly, the breathing tube, the battery pack, and the support belt. Wipe with clear water and then allow them to air dry.
5. Store the Proflow 3, after cleaning and through drying, by placing the butyl hood with the breathing tube in the black canvas respirator bag. On the blower unit, replace the red caps in the three air filtration element ports and the air outlet on the top of the unit.
6. The battery must be charged after each use. Connect the battery charger to the wall receptacle (if not already connected), open the protective cap on the charging connector, and insert the charger plug into the charging connector and turn clockwise until the lock clicks.

Cartridge selection and attachment:

1. Remove three filters/cartridges from their packaging and verify that they are the appropriate type for the application by examining the label attached to the filter/cartridge housing.
2. For gross decontamination of patients use Air Purifying Cartridge P/N 045123 from Scott Health and Safety.
3. To install the air filtration cartridges inspect the gaskets in each of the air filtration element ports (replace if damaged or missing). Open sealed packages containing the cartridges and attach the cartridges to the blower assembly by threading into the air filtration element ports until hand tight. *Tighten firmly but do not over tighten.* The cartridges are intended for one time use only. Dispose of used filters/cartridges in accordance with applicable regulations.

Battery Pack Care:

1. Battery Charging -- A completely exhausted battery should be charged for 6 hours. Connect the battery charger to the wall receptacle, open the protective cap on the charging connector, and insert the charger plug into the charging connector and turn clockwise until the lock clicks.
2. When charging is complete, remove the charger plug by pulling back on the lock while turning counter-clockwise and replace the protective cap on the charging connector. Test operation as previously described. A fully charged battery will operate for approximately 8 hours.

Battery Replacement

Remove/replace the rechargeable battery when necessary by the following procedure:

1. Clean the respirator if contaminated and remove the cartridges and breathing tube from the blower assembly.
2. Using a Phillips screwdriver, loosen the steel screw and detach the body tensioner. Remove the blower from the body by rocking it out of the flexible body and removing threaded coupling from the opening in the flexible body.
3. Carefully pull the battery leads to draw the battery out of the battery compartment.
4. Disconnect the old battery and replace with new battery SCOTT P/N 063548. Align the battery connectors and push together until they lock.
5. Slide the new battery into the battery compartment.
6. Inspect the O-ring on the blower inlet to verify that it is present and in good condition. Reinstall the blower by first inserting the threaded coupling through the opening in the flexible body and rocking blower back into position. Be sure wires are not pinched during reassembly.
7. Verify that blower inlet is properly seated in blower housing by looking up through the first filtration port. Inlet must fit evenly within housing opening.
8. Use the Retaining Ring on the threaded coupling to secure the body tensioner in position while reattaching the steel screw. Body tensioner must fit evenly in the recess provided for it in the blower housing.
9. Tighten the steel screw until a gap of approximately 3mm to 5 mm remains between the ends of the tensioner.
10. Recharge battery according to recharging procedure. After charging, test unit and check for leakage around blower housing before returning to use.

Preventive Maintenance:

Battery recharging: Infrequently used battery packs should be fully charged initially, and then recharged periodically to maintain a full charge. The outlet strip for the chargers is set up with a timer to automatically charge the units over night once per week.

Monthly PAPR inspections: Inspect the SCOTT Proflow 3 PAPR using the SCOTT Proflow 3 PAPR Monthly Inspection Checklist.

SCOTT Proflow 3 PAPR (powered air purifying respirator)
Monthly Inspection Checklist

1. Battery recharging:
Infrequently used battery packs should be fully charged initially, and then recharged periodically to maintain a full charge. The outlet strip for the chargers is set up with a timer to automatically charge the units over night once per week.
2. Proflow 3 PAPR Unit:
 - a) Wipe the Proflow 3 blower unit and battery pack with a mild cleaning solution, rinsing with clear water, and air dry as necessary. Do not immerse the blower unit.
 - b) Remove the red caps in the three air filtration element ports and the air outlet on the top of the unit. Examine the blower assembly for damage or cracks. Verify that there are no loose objects rattling inside blower assembly. Make sure to replace the red caps in the three air filtration element ports and the air outlet on the top of the unit.
 - c) Correct any deficiencies immediately or tag the respirator for repair and remove from service.
3. Butyl Hood and Breathing Tube:
 - a) Carefully examine the entire hood and breathing tube. Look for tears, holes, or cracks.
 - b) Bend the breathing tube to verify that it is flexible.
 - c) Check to see exhalation valve disk is clean and free of rips or damage.
4. Airflow Status Check:
 - a) After start-up the blower will stabilize at the standard flow rate and the display will begin to alternate between the BATTERY CHARGE STATUS (C#) and the AIR FLOW STATUS(F#).

